

ABSTRACT OF THE DISCLOSURE

METHOD, APPARATUS, AND PROGRAM TO DETERMINE THE
MUTABILITY OF AN OBJECT AT LOADING TIME

A mutability mechanism is provided for parsing an
5 object at loading time. The mutability mechanism inserts
a property into the object that indicates whether or not
the object is immutable. The mutability mechanism looks
at the code for the object and determines whether any
other objects can modify the object. If the object
10 cannot be modified after it is created, then the new
property is set to indicate that the object is immutable;
otherwise, the property is set to indicate that the
object is mutable. This property can be inspected at
runtime when a call is made to a program object. If an
15 object passed as an argument is marked mutable, a clone
of this object must be passed to the callee. However, if
an object passed as an argument is marked immutable, a
simple reference to the object may be passed as an
argument to the callee.